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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,054	07/14/2003	Zhongze Wang	2269-3541.3US (97-0855.03)	7663
24247	7590	05/19/2004	EXAMINER	
TRASK BRITT P.O. BOX 2550 SALT LAKE CITY, UT 84110			ESTRADA, MICHELLE	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/620,054

Applicant(s)

WANG ET AL.

Examiner

Michelle Estrada

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 30-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/14/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I (claims 1-29) in Paper filed 2/27/04 is acknowledged.

The Preliminary Amendment filed 10/17/03 is acknowledged.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-12 and 14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 and 13 respectively of U.S. Patent No. 6,277,674. Although the conflicting claims are not identical, they are not patentably distinct from each other because although claim 1 of U.S. Patent 6,277,674 does not broadly claim a refractory metal nitride layer, it is well known in the art that a refractory metal nitride layer can be a titanium nitride layer.

Claims 1-12 and 14-29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 and 6-11 respectively of U.S. Patent No. 6,511,868. Although the conflicting claims are not identical, they are not patentably distinct from each other because although claim 1 of U.S. Patent 6,511,868 does not broadly claim a refractory metal nitride layer, it is well known in the art that a refractory metal nitride layer can be a titanium nitride layer. Also, although claim 1 of U.S. Patent 6,511,868 does not broadly claim a conductive layer disposed over the refractory metal nitride layer, it is well known in the art that a tungsten silicide layer is a conductive layer.

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claim 13 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 1 of prior U.S. Patent No. 6,277,674. This is a double patenting rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14 and 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Komenaka (5,914,524).

With respect to claim 14, Komenaka discloses an insulating substrate (41); a refractory metal nitride layer (102) disposed above the insulating substrate; a conductive layer (101) disposed over the refractory metal nitride layer;

With respect to claim 19, Komenaka discloses wherein the refractory metal nitride layer includes titanium;

With respect to claim 20, Komenaka discloses wherein the refractory metal nitride layer comprises titanium nitride;

With respect to claim 21, Komenaka discloses wherein the conductive layer is a metal (Col. 6, lines 1-24).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 13, 15-18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komenaka (5,914,524) as applied to claims 14 and 19-21 above, and further in view of Endo et al. (5,990,537).

Komenaka does not disclose that the conductive layer is a tungsten silicide layer; wherein the insulating substrate is an isolation region; wherein the isolation region is a field oxide region; wherein the field oxide region is disposed on a semiconductor substrate; wherein the semiconductor substrate is a silicon wafer.

With respect to claims 1, 13 and 22, Endo et al. discloses that the fuse may be made of a tungsten silicide layer (Col. 4, lines 37-40);

With respect to claims 2 and 15, Endo et al. discloses wherein the insulating substrate is an isolation region (34);

With respect to claims 3 and 16, Endo et al. discloses wherein the isolation region is a field oxide region (36);

With respect to claim 4 and 17, Endo et al. discloses wherein the field oxide region is disposed on a semiconductor substrate (31);

With respect to claim 5 and 18, Endo et al. discloses wherein the semiconductor substrate is a silicon wafer (Col. 4, lines 4-20).

It would have been within the scope of one of ordinary skill in the art to combine the teachings of Komenaka and Endo et al. to enable the conductive layer formation step of Komenaka to be performed according to the teachings of Endo et al. because one of ordinary skill in the art would have been motivated to look to alternative suitable methods of performing the disclosed conductive layer formation step of Komenaka and

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art recognized suitability for an intended purpose has been recognized to be motivation to combine. See MPEP 2144.07. Furthermore, it would have been within the scope of one of ordinary skill in the art to form the fuse in an isolation region to electrically isolate the active regions.

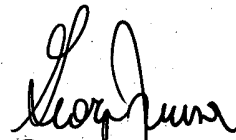
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Estrada whose telephone number is 571-272-1858. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 571-272-1855. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2800.



MEstrada
May 17, 2004



George Hourson
Primary Examiner
Art Unit 2823